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# Geographic Charisma and the Potential Energy of Ebola

## Introduction

> When word came that two American health care workers in Liberia had become infected, the outbreak suddenly drew global headlines labelling it an "epidemic". Ignited by media attention, fear erupted and spread faster than the virus itself. Quarantine is now the watchword. Fear of Ebola escaping the African continent has finally brought international attention (Mitman, 2014, 1764)

Ebola is an 'exceptional' or 'master status' disease in that it 'attracts more resources and attention than many other diseases that affect more people and cause more morbidity and mortality' (Leach & Hewlett, 2010, 51, see also Gardner 2008). Ebola is so 'rare, contagious and deadly' that it inspires 'both fear and fascination in equal measure' among the public and within the medical community (Walsh & Johnson, 2018, 33). These responses are, on the one hand, completely logical given case fatality rates of up to 90% (Lefebvre et al., 2014), the difficulty of predicting future animal-human "spillover" events (Quammen, 2014) and the lack of any proven vaccination or treatment. It is also logical given the extreme symptoms of the disease: fevers; extreme dehydration; excruciating pain; hiccups; sudden death and (dependent on the strain of the Ebola virus, but still most famously) haemorrhage (Abramowitz, 2017). Given this and as this paper will argue, Ebola is not only an unusually 'emblematic disease' (King, 2015a), but one that possesses almost unparalleled charisma. This charisma has, in turn, been cultivated and strategically deployed to mobilise people, money, resources and research under the banner of "securitisation" to ensure that the disease remains contained within its African ecological niche, while also being used to restrict the movement, rights and freedoms of those deemed to be potential carriers (Radin, 2015).

Charisma is a term most often appended to people for how traits of their personality, communicative capacity or appearance bestow them with exceptional power and agency (Weber, 1947; 1968). However, non-human entities such as diseases similarly accrue meaning, power and value that can ignite powerful affective responses which can be manipulated and strategically deployed (Herrick, 2016; Lorimer, 2007). The language and imagery used to describe Ebola both speaks to and is actively

generative of its charisma, even if it has not yet been conceptualised as such within the sociological literature on health. The '*frisson* of the word Ebola' (Quammen, 2014, 30, emphasis added) seems self-evident post-2014, but it is worth remembering that since the very first recorded outbreak in 1976; the virus has been personified to such an extent that it could only ever be charismatic. Epidemiological lexicon further deepens the sense of viral agency as diseases "spill over", "jump", "travel", "mutate" and "colonise" their hosts (King, 2004; 2015b). These linguistic tropes were given further power and salience in the public imagination by the advent of the 'emerging infectious disease' (EID) concept in the early 1990s that put the 'world on alert' in *anticipation* of potential disease threats largely contained in the global south becoming unleashed on the global north (Weir & Mykhalovskiy, 2010, 50). As Lorimer argues, nonhuman charisma 'can best be defined as the distinguishing properties of a nonhuman entity or process that determine its perception by humans and its subsequent evaluation' (2007, 915). Of these 'distinguishing properties' Ebola's actual and potential geographies are crucial to helping explain its perception and evaluation as an especially apocalyptic and unpredictable 'threat'. Given this, here I will explore how the geography and epidemiology of Ebola splice together to produce a particular form of *geographic charisma.* Seen in this way, Ebola's charismatic valence emerges from its geographic characteristics just as much as its epidemiological deviousness. In turn, this charismatic valence helps explain the degree of dread, fear, anxiety and narratives of blame that encircle Ebola as both mass media spectacle and human disaster.

To explore these ideas, I will first examine the history and genesis of the EID concept and how it, in turn, provided the language and political urgency undergirding Ebola's charismatic valence. After exploring the value of the charisma concept to sociological theorisations of epidemic disease, I will then extend this by arguing for Ebola's geographic charisma through three themes. First, through being *in place* or endemically "African" in which distant, geographically-isolated outbreaks that were fairly easily contained and temporally self-limiting captured the public imagination through disproportionate mass media coverage, bestselling books and movies. Second, through the potential of moving *out of place* from rural to urban and from local to global. In particular, the EID concept

reinforced images of the urban – and particularly African cities – as innately and uncontrollably pathogenic that could ignite a 'perfect storm' (Piot, 2014) amplifying human transmission of Ebola. Indeed, much of the language of risk and threat in the West African outbreak was appended to the unbridled potentiality of the urban as a space where outbreaks would become an apocalyptic catastrophe (Butler, 2015). So, while media images of Freetown, Monrovia and Conakry gripped the global imagination in 2014, it was the latent threat of Ebola appearing in megacities such as Lagos or New York that became reified as the *real risk.* Third, the power of Ebola to catalyse public attention derives from its perceived 'potential energy' or its devastating and ultimately unpredictable capacity to mutate, move, change and infect in ways that exceed the current capacities of epidemiological surveillance and medical knowledge. In so doing, this paper represents a significant contribution to sociological concerns with our pervasive 'culture of fear' (Glassner, 1999; Furedi, 2006), its uneasy relationship to risk (Gardner, 2008), the social production (and consumption) of epidemics (Dingwall et al, 2013; Strong 1990) and the layers of meaning and symbolism that characterise the social mediation of biological events (Barbour and Huby, 1998; Sontag, 1979). Crucially, it also contributes to the limited sociological engagement with the West African Ebola outbreak – especially when compared to the plethora of work within medical anthropology – and with global health more broadly (cf Broom and Broom, 2017; Herrick and Reubi, 2017).

**The Emerging Infectious Diseases concept, Ebola and the origins of geographic charisma**

Concern with the perils of living with pathogenic microbes is longstanding, but by the 1970s, agencies such as the US Centers for Disease Control (CDC) and the National Institutes of Health (NIH) were slashing their research budgets and surveillance activities in excited anticipation of a new era marked by the "end" of infectious diseases (Garett 1995a; Mayer, 2000). This was largely spurred by a belief in the power of antibiotics for the treatment of common infections, falling death rates from infectious diseases in the global north, a shift in concern (and thus funding) to chronic diseases such as cancer and heart disease and the success of vaccination programmes against common and previously fatal childhood diseases. Yet, as Richard Krause - Director of the National Institute of Allergy and Infectious

Diseases from 1975-1984 - was to note, 'microbes pursue every possible avenue to escape from the barriers that are erected to contain them, and we must be forever on our guard. They will seek our undercurrents of opportunity and re-emerge' (1998, 2). Infectious disease specialists were concerned that complacency in the global north and the concomitant dismantling of local public health infrastructure – as well as the de-funding and closure of international networks of research institutes and laboratories – were creating ideal conditions for viral emergence and re-emergence. As Krause argued, this hollowing out of infectious disease capacities ignored the vital issues occurring "off-stage": the 'rising tide of antibiotic resistance amongst microbes, the genetic drift of microbes in the evolutionary stream, and the microbial emergence in unexpected places and unexpected times as a consequence of modifications of lifestyle, medical practices, commerce, agriculture, war and mass transportation' (1998, 4). Indeed, the folly of the international community's complacency was brought home and painfully demonstrated by a variety of disease events including the emergence of HIV/AIDS in the early 1980s, the return of cholera to the Americas in 1991, an outbreak of plague in India in 1994, and Ebola in (what was then) Zaire in 1995 (Mayer, 2000; Snowden, 2008). These would all sanction a renewed commitment to the fortification of national defences against novel and seemingly unpredictable international disease threats.

These factors were also among the guiding concerns behind the 1992 publication of the US Institute of Medicine's (IoM) seminal report *Emerging Infections: Microbial Threats to Health in the United States* (Lederberg et al., 1992). The report itself gave a 'political rationale' (King, 2004, 66) for increased attention to and funding for the *national* control of disease threats of *international* origin, through newly invigorated epidemiological surveillance tools and networks, enhanced research capacity and greater domestic border control. Even though it was far from true, proponents of the EID concept argued that the present moment was one of 'unprecedented novelty' (Weir and Mykhalovskiy, 2010, 35) defined by 'a problematic of connectedness' (*ibid,* 31) that would be endlessly encapsulated in various iterations of the spatial metaphor of microbes and diseases having "no borders". The discourse of novelty, magnitude and scale was mobilised within the IoM report by

framing disease risk not by pathogen, but rather by social, economic, geographical and cultural modes of transmission and amplification, presaging later arguments around the social determinants of health (Marmot, 1998). Importantly for the genesis of charisma, the EID concept constituted an 'epistemological break in international communicable disease control from one orientated to known diseases to one responsible for a microbial world full of *potential* and *surprise*. Not only was the microbial world full of the *actual*, the *emerging* and the *potential*, but this microbial multiplicity also had to be made governable' (Weir & Mykhalovskiy, 2010, 62, emphasis added). Yet despite the concern with governing emergent risk, the EID paradigm did nothing to strengthen existing African healthcare provision nor did it address the structural and social determinants of poor health that the original IoM report had so carefully highlighted. Indeed, as Farmer (1996) has argued, the EID concept's argument for a constant 'world on alert' ironically did little to alter the actual conditions of disease emergence.

The West African outbreak was a watershed moment in this teleological journey, cleaving open the weaknesses in regional public health infrastructure that enabled the virus to jump scale from the kind of geographically isolated outbreak that had long characterised Ebola to a geographically diffuse human catastrophe (Abramowitz, 2017; Lakoff, 2017). Prior to 2013, the highest number of fatalities in an Ebola outbreak was in Yambuku (in what was then Zaire) in 1976, in which an estimated 280 people died with a case fatality rate of 88% (Johnson et al., 1977). The Ebola outbreaks of the 1970s inconveniently coincided with the belief that 'microbes were biologically stationary targets and that diseases could be geographically sequestered'. In turn, this 'contributed to the smug sense of immunity from infectious diseases that characterised health professionals from North America and Europe' (Garrett, 1996, 67). This smugness would be dashed not just by HIV/AIDS, but also by the realisation that Ebola-infected monkeys had managed to travel, undetected, from the Philippines to a laboratory facility in Reston, Virginia in 1989. While the event did not cause any human fatalities, it nevertheless sparked hysteria when it was first brought to light by Robert Preston in a 1992 *New Yorker* article entitled 'Crisis in the Hot Zone'. It was then immortalised in the public imagination

through two bestselling books released in 1995: Robert Preston's semi-fictional *The Hot Zone* and Laurie Garrett's *The Coming Plague: Newly Emerging Diseases in a World Out of Balance. The Hot Zone* became something of a cultural phenomenon and 'allowed otherwise "local" stories to take on a "global" significance, persuading an American public notoriously uninterested in disease outside its own borders to pay attention to infectious disease... [giving] emerging diseases an ominous immediacy' (King, 2004, 74). This 'immediacy' would be cemented still further with the release of the movie *Outbreak,* just a few weeks before the town of Kikwit in the DRC became the latest Ebola 'hotspot'.

The cultural iconography of Ebola unleashed by *The Hot Zone* – of apocalyptic scenes of unimaginably horrific symptoms, contagion, biocontainment suits, Level Four biosecurity laboratories, of places and people being "hot" (danger from contamination or contagion) or "cold" (safe and decontaminated) – came at a time of a growing frequency and geographic spread of outbreaks (King, 2015b, Ungar 1998). Outbreaks in Kikwit and Mayibout (Gabon) led to rapid mobilisations of international teams of disease experts and were greedily followed by the international press (Garrett, 1996; Lynteris, 2016). The exotic story line was further heightened by Ebola's suspected zoonotic transmission from primates to local hunters and the enduring mystery of its exact reservoir host. Laurie Garrett covered the Kikwit outbreak for Vanity Fair magazine in a potent piece entitled 'Plague Warriors' (1995b). Her invocation of the biblical term 'plague' and the war metaphors so often casually corralled into epidemiological terminology (see Sontag, 1979) was a precursor to the sensationalist reporting that came to define the West African Ebola outbreak coverage (Mitman, 2014). Ebola captured the public imagination like no other, meaning that small and distant outbreaks became spectacular stories in the international press. In 1996, for example, an article in *The Independent* confirmed that 'thirteen people have died in the west African state of Gabon from the highly infectious Ebola virus after a dead chimpanzee was skinned for a feast in a remote village'. The article also made sure to highlight that Ebola 'causes massive internal and external bleeding'. Such coverage ensured that, as Paul Farmer argues, Ebola became and remained a 'household word in parts of Europe and North America' as 'symbolically and

proverbially, Ebola spread like wildfire—as a danger potentially without limit' (1996b, 262). It is its limitless potentiality that, arguably, helps drive the charisma to which I will now turn.

Weber's theory of charisma was originally concerned with theorising *types* of authority and, therefore, forms of power (Turner, 2003). In his now-classic definition of charisma, he argued that it is to be found in 'a certain quality of an individual personality by virtue of which he is set apart from ordinary men and treated as endowed with supernatural, superhuman or at least specifically exceptional qualities' (Weber, 1947, 329). Crucially, charisma requires that these powers be recognised as such and that 'this recognition is a matter of complete personal devotion arising out of enthusiasm or of despair and hope' (1947, 359). Charisma thus emanates from an *extraordinary* character, event or quality that can be reinforced as such during times of distress (Weber, 1967). As Adair-Toteff then contends, 'charisma is extremely personal, it is highly irrational, it is very temporary, and, above all, it is especially unusual' (2005, 191). The widespread appropriation of the concept of charisma (Dow Jr, 1969) may be traced back to the fact that it largely serves as a 'heterogenous residual category' with the potential for widespread empirical application (Turner, 2003, 5). It then might come as some surprise that its application to the non-human realm has been relatively limited. Geographer Jamie Lorimer's engaging work on 'charismatic species' (2007) is exemplary in this regard and has spawned an interest in using the frame of charisma to better understand the charismatic power and attraction of certain flora and fauna to humans and the consequences of this for fields such as conservation biology. Yet, within social scientific studies of health, charisma has been curiously under-utilised as an explanatory concept (although see Kelly, 2018).

It was with this gap in mind that I argued, in a 2016 paper, that the failure of noncommunicable diseases to incite the kind of fear, dread and anxiety that had led to the comprehensive global funding of HIV/AIDS could be traced back to the innate lack of charisma of this artificially constructed category. Importantly, the original impetus for that paper was a recognition that, by contrast, Ebola was 'devastatingly charismatic' given its 'exceptional' and 'unusual' qualities that grant it extraordinary

power to induce often irrational and disproportionate affective responses (2016, 2). And, just as Lorimer (2007) argued in relation to what he termed 'aesthetic' and 'corporeal' charisma, the power and agency of Ebola can be further cultivated and enhanced by the processes and contexts of human interaction with the disease and its presentation by the mass media. Certainly, there is no lack of sociological engagement with the ways in which diseases are framed or, in the case of Phil Strong's (1990) work on 'epidemic psychology', the ways in which 'an epidemic of fear' and of 'suspicion' can be ignited by the gross unknowns of novel, unknown and emergent diseases such as HIV/AIDS. This fear is not only 'wholly separate from the reality of the disease' but feeds into further 'panic and irrationality' (1990, 253). Strong's paper may never expressly mention charisma, but the psychological fear response engendered by his examples of HIV/AIDS and plague highlights how human irrationality can be magnified during times of crisis. This resonates strongly with the Weberian notion of people being drawn to charismatic authority in times of duress or distress. The possibility of Ebola's global spread in 2014 is one such moment of clear international distress. While I examined the charismatic valence (and failings) of disease categories in my 2016 paper, here I want to add an additional conceptual layer to this by arguing for Ebola's *geographic* charisma. In so doing, I not only want to push the charisma concept more firmly into the sociological study of health and illness, but also make an interdisciplinary plea for charisma's *spatial* genesis, expression and consequences (Terlouw, 2010). Here then I want to explore how the power and agency of Ebola can be traced to its geographical origins, fears over its geographical spread and justified concern over its geographical unpredictability. These will be explored in the three sections that follow.

**Geographic charisma I: Ebola *in* place**

The EID concept provides the structure and justification through which Ebola has come to gain charismatic valence, a quality that has been further entrenched by the geographical imaginaries it both depends on and brings into being. Ebola's elision with Africa as its 'symbolic place' (Terlouw, 2010, 335) has invoked a range of spatialised tropes, from a continent presented as a geographically undifferentiated source of risk, to a detailed series of places characterised by their exotically-named

outbreak locations, under-resourced hospitals brimming with unimaginable sickness, culturally mysterious encounters between humans and potentially virus-filled ecologies and the hunt for virus reservoirs across jungles and caves. Prior to 2013, Ebola outbreaks were small in scale, mostly rural and relatively quickly contained, yet narratives of the disease tended to incite levels of fear and anxiety in the global north that far exceeded any likely risk horizons (Broom and Broom, 2017; Washer, 2011). From the 1990s then, there was an 'othering' of Ebola to Africa which may have contained fear in the global north (Leach & Hewlett, 2010), but also reinforced the virus's mystique by squarely associating it with far-flung places out of the geographic purview of all but the most adventurous virus-hunters (Lynteris, 2016). While Ebola is not endemic to any particular place as outbreaks tend to happen sporadically in a variety of locations; the idea of Ebola somehow "belonging" to an undifferentiated African continent gives the impression of endemism. As such, Ebola has been naturalised as an imminent danger in, of and from Africa, its land, people and cultures. Ironically, this tendency has been entrenched by the longstanding involvement of anthropologists in Ebola research whose input 'appears to reflect both the "exotic" nature of haemorrhagic fevers: "they are all about burial practices"; and the apparently exotic locations and "traditional cultures" in which many outbreaks have occurred – isolated forest communities with unfamiliar and, to Western eyes bizarre, beliefs and practices' (Leach & Hewlett, 2010, 60). This has doubtlessly reinforced Ebola's geographic charisma by propagating culturally crucial, but nevertheless, 'exotic explanations' (Farmer, 2014) for Ebola's transmission that are generative of the kinds of affective responses and 'frightening fantasies' that the disease animates (Lorimer, 2007, 920).

Scholarly accounts of Ebola may not have directly pervaded the public imagination, but the disproportionate space granted to Ebola stories by such titles as *Time, Newsweek* or *Vanity Fair* as well as newspapers across the political spectrum have made a remotely-located, distant virus and the geographic loci of outbreaks into household names (Joffe & Haarhoff, 2002). Laurie Garrett's 1995 report for *Vanity Fair* on the Kikwit outbreak is worth dwelling on for the ways in which the characterisation of the disease is indelibly tied to its characterisation of Africa in general and the DRC

and Kikwit in particular. The hyperbolic preamble to the article describes how 'Ebola had resurfaced and was killing again. Men, women, and children lay dying in the city of Kikwit as the lethal virus ate away at its victims' veins, spreading at the slightest contact with the blood that poured from their eyes, ears, noses, and mouths'. Given this grotesque – and most likely inaccurate - description, it is of little surprise that Kikwit itself is named 'the ground zero of death' where 'a team of infectious-disease specialists from around the globe [had] assembled to do battle with the nightmare epidemic'. Garrett's writing then starts with a description of how 'the instant the jet's doors open at Kinshasa's N'Djili International Airport, cool European air is exchanged for an acrid, sweltering dampness that immediately makes the whole body perspire'. The 'weary traveler' is then attacked by 'swarms of malarial mosquitoes' followed by 'hordes of "officials" and "helpers" eager to relieve visitors of carry-on luggage and burdensome cash' (1995b). Having followed the international epidemiological team to Kikwit General Hospital, Garrett describes the profusion of blood and bodily fluids overtaking a hospital 'full of death' without 'running water, linens, sterile syringes, or essential supplies' and in which 'the unpaid staff was ministering to the patients' needs without … effective masks' and with 'only used, latex gloves, and no plastic aprons, gowns, booties, or goggles'. In a final flourish, the article invokes ideas of traditional cultural engagements with disease and death, describing how grieving local women 'wail' and cry out the 'dead's names and attributes'. Such linguistic tropes and the sensationalised visual imagery of pain, suffering, cultural difference, poverty and chaos that accompany Ebola (Elliott, 2015; Joffe, 2008) are powerfully constitutive of Ebola's imagined geographies, cultures and its landscapes of risk and danger. Such representations of geographic difference would be powerfully re-invoked during the West African outbreak.

Garrett's characterisation of the DRC and its people as corrupt, its air as miasmically malarial and its hospitals as iatrogenic amplifiers of disease and suffering (see also Murray & Peters, 1998, 381) is a common tendency in Ebola narratives and perpetuate fears of the exotic, of geographical and cultural difference. Accounts of Ebola in the mass media as well as in bestsellers such as *The Hot Zone* have thus been responsible for driving an epidemic of what *Vice* has termed 'Fearbola' (Blakey et al., 2015).

Indeed, and as Gladwell has asserted, it would be fair to contend that 'in the epidemic of virus paranoia, *The Hot Zone* is patient zero' (Gladwell, 1995). Robert Preston's frenzied book, for example, returns again and again to the site of Kitum cave in Kenya where two tourists were infected with what was later found to be the Marburg virus in the hunt for the zoonotic origins of the Ebola virus. As Gladwell (1995) contends, 'Kitum Cave is Preston's miasma, a dark hole deep in the rainforest that gives Ebola an appropriately sinister provenance'. He adds that the rhetorical device of the cave serves little technical and scientific purpose in the story of Ebola, but is rather essential to the creation of a 'terrifying super-virus of our own creation, a mutant hybrid of cold war apocalyptics, biblical moralism and environmental fire and brimstone' (*ibid*). As Paul Farmer has observed, Ebola's visibility and emergence have also 'been a question of our consciousness' (1996b, 262) as well as our collective voyeurism. He argues that 'modern communications' have allowed Ebola, as a 'small but horrific plague', to 'spread like wildfire—as a danger potentially without limit' (see also Joffe, 2011). Ebola's emergence *in Africa* and *as African* thus became both the source and fuel for its geographic charisma. The global north's fear of Ebola was thus firmly entrenched by the time of the West African outbreak. As the next section will explore, this charisma is further magnified by the fear of Ebola's potential to move *out of place,* to jump from its ecological niche, travel along transport routes, cross borders, find its way into cities, planes and, ultimately shatter the epidemiological sanctity of the global north.

**ii. Geographic charisma II: Ebola out of place**

The EID concept forms the justification for a policy of global scale communicable disease containment. As Weir and Mykhalovskiy argue, this 'falls on a North-South cleavage in terms of world power as the chief areas of endemic communicable diseases to be contained are found in the global south' (2010, 51). Containment thus has a 'geopolitical spatial organisation' (*Ibid*) that requires epidemiological surveillance and border strengthening to ensure that EIDs remain *in place* and to reduce any possibility of 'foreign bodies bringing exotic germs' (Weir & Mykhalovskiy, 2006, 143) into the biomedically fortified countries of the global north. Of course, the concept of EIDs makes clear that biomedical

fortification may be necessary but is an essentially futile task in a world in which 'microbes know no country' (Krause, 1998, 6). These unseen and mobile threats have become even more so in an age of hyper-connectivity and free movement where, as Laurie Garrett explains, 'a person incubating a disease such as Ebola can board a plane, travel 12,000 miles, pass unnoticed through customs and immigration, take a domestic carrier to a remote destination, and still not develop symptoms for several days, infecting many other people before his condition is noticed' (Garrett, 1996, 69). This undetected viral movement propels EIDs such as Ebola from a source of fear based on the voyeuristic spectacle of the distant suffering of exotic others to immediate, proximal threat. Put another way, Ebola's 'stealthy traits evoke fear and dread, as do the fearsome symptoms of the disease when they finally appear' (Shultz et al., 2016, 305) and this stealthiness is inextricable from the disease's geographic portent. When a disease once presumed to be spatially-fixed starts to travel, such newly-acquired geographic mobility only multiplies its charismatic power.

In this sense, the West African outbreak was a watershed moment where, as Lakoff argues, 'a disease that in prior outbreaks had never caused more than a few hundred deaths turned into a global health catastrophe' (Lakoff, 2017, 140). The "catastrophe"– Ebola's emergence in and diffusion across countries that had never previously had outbreaks at an unprecedented scale - painfully highlighted the virus's capacity to exceed its known and presumed geographies. Reconstructions of the progression of the outbreak show that it started with the index case of a two year old boy who died in rural south-eastern Guinea in December 2013 and, by the time it was reported to the WHO in March 2014, multiple cases were being reported elsewhere in Guinea and Liberia. By April, cases were reported in neighbouring Sierra Leone and by June, Médecins Sans Frontières warned that the epidemic was 'totally out of control'. The WHO would not declare the Ebola outbreak to be a Public Health Emergency of International Concern until August 2014, belatedly releasing funds and resources much to the criticism of those NGOs remaining on the ground (Walsh & Johnson, 2018). The story of the failures of the international community and of regional governments to recognise and respond to the scale of the West African outbreak is now well known (Médecins Sans Frontières, 2015). Lakoff

suggests that this denialism might, in part, be traced to 'a transformation in experts' understanding of Ebola since the late 1980s' (Lakoff, 2017, 148). During this time, he argues, Ebola 'had undergone a conceptual mutation' and had slipped off the radar of the most fearsome EIDs because global health authorities were confident that they understood its pattern of transmission, had developed standardised methods of containment and because during all previous outbreaks 'the disease had never spread far beyond its initial site of occurrence' (*ibid*). The West African outbreak, however, laughed in the face of this geographic complacency and instead exhibited an unprecedented spatial dynamism.

Outside Guinea, Liberia and Sierra Leone; cases were identified in Italy, Nigeria, Mali, Senegal, UK, US and Spain. While this geographic reach may not quite represent our globalised world as a one of 'universal contagion' (Hardt & Negri, 2001, 136), the spatial jump of Ebola demonstrates most clearly the limits to and failures of the kinds of 'spatial measures of prevention, reduction and eradication' argued as essential to the control of EIDs (Bashford, 2006, 1). It is thus interesting that critics of *The Hot Zone* had focussed on the book's fearmongering geographic fantasies, arguing that 'Ebola Sudan was as likely to get to the moon as it was to leave Central Africa and find its way to Athens, Paris, London and Singapore' (Gladwell, 1995). And, while Gladwell's argument rang true for two decades, the West African outbreak showed that Preston's spatial prophecies would be partly realised. Ebola's geographic charisma was clearly manifest in demonstrating its capacity to reach the west, with these first recorded episodes of contagion elsewhere extrapolating the 'epidemic threat from Africa to the rest of the world' (Idoiaga Mondragon et al., 2017, 957).

In a return to the ecological framing of the IoM report, the threat of Ebola emerging in uncontrolled, rapidly growing and densely populated urban centres without adequate public health and medical infrastructure became real as Monrovia, Freetown and Conakry became epidemic hotspots and the global news media stationed themselves in the slums of West Point. The 'cachet' of Ebola was thus concretised by the 'sheer horror' (Stern, 2014) of media images of biohazard suits, dead bodies,

holding units and treatment centres, quarantine and unfathomable levels of human suffering in Guinea, Liberia and Sierra Leone (Le Marcis & Nguyen, 2015; Pallister-Wilkins, 2016). But, when a case was identified in Lagos, the most populous city in Africa, the geographical register quickly upscaled to one of potential "apocalypse" (Butler, 2015), with Garrett penning a *Foreign Policy* article entitled 'You are not nearly scared enough about Ebola' arguing for the *potential* horror of it infiltrating a 'chaotic urban centre' of more than 22 million and, with it, the prospect of exponential and uncontrollable global spread (Garrett, 2014). Ebola, like SARS before it, suddenly seemed able to 'challenge the notion that cities populated by the wealthy transnational elite are invulnerable to infections previously conceptualised as a problem of a poor and distant *other'* (Washer, 2011, 50). The concept of the city as an 'ecological niche' in which 'new selective pressures favour the emergence of new variant viruses' was clearly tied to the 'new megacities of Africa and other tropical zones of the world' in many of the key works on EIDs (Krause, 1998, 402). Not only then were EIDs given a geographic locus, but precise sites of potential risk amplification were firmly located in African urban environments.

The conceptualisation of the city as disease vector was nothing new by the time of the IoM report, but the express invocation of urbanisation and urban forms as aetiological factors was a marked detour from common epidemiological framings of the time (Farmer, 1996a; King, 2004). One of the most profound consequences of the West African outbreak, apart from loss of life, was to starkly reveal to an international audience how the collapse of *local* public health infrastructure not only contributed to the regional death toll, but also presented profound *global* health risks (Lachenal, 2014; Nunes, 2016). Herein lies the very heart of Ebola's geographic charisma. It is not simply a question of suffering contained at a distance, or the movement of few cases of infected patients from global south to north. Instead, the charisma emerges from the complex interplay between forces operating at different scales that conspire to render the healthcare systems of Guinea, Sierra Leone and Liberia incapable of responding not only to the threat of an unprecedented infectious disease outbreak, but at a much more important and fundamental level, the quotidian health needs of its people (Lakoff, 2017). Media reports of the West African outbreak zoomed in on those 'other' biomedical spaces that had

previously held little interest to those outside the global health community. Suddenly TV and print journalists were reporting from West African hospitals and treatment centres as the lack of doctors, nurses and medical supplies shifted from a niche academic concern to a major political and human-interest story (see for example Daniel Berehulak's Pullitzer-winning work in the *New York Times*). The focus on the perilous state of vastly understaffed and under-resourced West African health systems and the deaths of healthcare workers created further fear and anxiety among the international community, feeding into a discourse of Ebola being uncontrollable in West Africa and, therefore the need for humanitarian intervention coupled with biomedical and spatial containment.

**iii. Geographic charisma III: The *potential energy* of Ebola**

The 'rebranding' of infectious diseases through the EID concept brought together genetic and molecular biology, ecology and public health to argue that the microbial world was constantly evolving and mutating, challenging the ability of scientists, doctors and governments to predict, understand and control risks to human health. Such microbial 'emergence' – either of *new* pathogens or an expansion of the *range* of existing ones – is a concept characterised by 'potentiality' (Weir & Mykhalovskiy, 2010, 40). The persuasive power of the EID concept lies in the inherent unpredictability and uncertainty of where, when and how future disease outbreaks will occur and the kinds of novel microbial threats that might cause them. Joffe argues that Ebola is a "hot crisis" where the mass media creates 'a sense of menace, a sense that the potential disease is dread inspiring, that it is developing in unpredictable ways, that it poses an immanent personal threat and that it challenges the assumed vulnerability of specific populations and is therefore "startling"' (2011, 447, see also Ungar, 1998). Much of the 'menace' and 'dread' from the 'urban legend' (Weldon, 2001) that is Ebola comes from the significant unknowns that encircle it, the unpredictability of future viral mutations (Rosenbaum, 2015) and the unfathomable nature of human responses to disease events both at home and abroad (see Strong, 1990). To further complicate matters and as the West African outbreak brought into relief, there is also residual uncertainty about the most appropriate and proportionate global response as well as more prosaic questions over who should and could pay for such interventions given the

continued defunding of the WHO and, most recently, the fragility of the future global health landscape under the Trump administration (McKee et al., 2017). The slowness of the WHO to respond brought about a moment of intense criticism (Kamradt-Scott, 2016; Piot, 2014), reflection (WHO, 2015) and calls for organisational restructuring (Moon et al., 2015). The slowness might have been the result of an interplay of factors not all of which were of the WHO's own making, but in a global landscape in which the WHO is the *only* and thus *de facto* global agency for emergency disease response, Ebola demonstrated how little room there could be for complacency over either the WHO's capacity or willingness to act (Walsh & Johnson, 2018).

The trope of potentiality is fed by the declensionist narratives of ecological 'disequilibrium' (Mayer, 2000) deployed by Preston, Garrett and the authors of the IoM report. Together they suggest that there are environmental and ecological changes that are occurring in remote and distant places that are outside our immediate control and for which globalisation is ready, poised to allow novel dangers to 'spread uncontrollably and get into the intimate spheres of life back home' (Brooks, 2014). These future geographies of risk and danger are, however, largely impossible to predict with any certainty given how little is known about Ebola's reservoir hosts and the impossibility of predicting zoonotic spillover events. Much more is known about secondary, human to human transmission and how to limit it through the appropriate use of Personal Protective Equipment (PPE), hand washing, quarantine and safe burials (Richards, 2016). Yet, despite the considerable knowledge base on Ebola built up over the past three decades, the hunt for a vaccine only accelerated when international research funds were belatedly released in 2014 and experimental treatments (e.g ZMapp) were only available to international healthcare workers and volunteers and those few infected in the global north (Fauci, 2014). The history of Ebola demonstrates how it spirals through cycles of panic-driven action and neglect (Nunes, 2016), with the current cycle of unprecedented action - necessitated by decades of public health neglect in West Africa - now tailing off again. Ebola thus exists in a state of latency, possessed by a potential energy to create momentary havoc that has repeatedly eluded the ability of global health mechanisms to predict it and, in the West African case, avert humanitarian disaster.

The notion of emergence 'constitutes infectious disease as an active or soon to be active presence' and this, Weir and Makhalovskiy contend, creates 'a dynamism around infectious disease… [that] relocates pathogenic microbes…into a present of persistent and always possible threats to human health, all the while constituting that present as open to human intervention' (2006, 246). This dynamism, in turn, has spatial and temporal dimensions that are still being questioned. How, for example, to predict or control future disease risk in a context in which primary and tertiary healthcare systems are dysfunctional? How to predict future outbreaks in a context where there is uncertainty over 'the threat posed by individuals who show no sign of their dangerousness and who may do harm at any time' (Hooker, 2006, 188; see also Stern, 2014)? How to predict future disease risk when there is always the possibility of Ebola's mutation into one that is even more contagious? The potential energy of Ebola – its lurking possibilities – feeds into the undercurrent of public and political 'apprehension', a sense of what *might be to come,* of the always-existing potential for catastrophe. Such apprehension is just as manufactured as it is real, and continued funding for EID programmes relies on the maintenance of public fear of impending microbial catastrophe, of the distant becoming proximal, of the potential becoming actual. Indeed, the WHO uses 'the threat of contagion to motivate wealthy nations to invest in disease surveillance and control out of self-interest—an age-old public health approach' (Farmer, 1996b, 266; see Lederberg et al., 1992, 33). Potential energy in a microbial and public health sense, is thus *real* energy in a political sense. The two come together to ensure that Ebola's charisma never wanes long enough for research funding to completely dry up. Of course, this charisma emerges from the actual and potential human suffering in African countries and is mobilised to ensure continued research funding for institutions of the north. This predictably and strategically uneven invocation of geographical means and ends ironically ensures the maintenance of Ebola's charismatic valence.

**Conclusion**

As I have explored in this paper, the 'toxic ecology' of Ebola 'thrives and spreads' through the charisma generated by its actual and potential geographies (Mitman, 2014, 1765). While the interdisciplinary

engagement with Ebola is profuse and spans biomedical, social sciences and arts and humanities, the virus's charisma has largely remained assumed, rather than a subject of an explicit sociological interrogation. This would seem a gross oversight given that reflection on the origins, genesis, nature and effects of Ebola's charisma provide a lens to help explain how accounts of the virus seamlessly and unquestionably splice together geography and epidemiology. That this happens is of less importance than what this splicing *does* and *enables* through the role that it plays in the firm characterisation of Ebola as definitively African in the popular imagination. This then sanctions a selective spatial and cultural application of blame and stigma for disease outbreaks, justifying international policies of geographic control and containment to limit the kind of international movement deemed to unleash Ebola's potential energy on the global north (Farmer, 2014). And while the West African outbreak allowed the perilous state of the region's health infrastructure to enter the popular imagination through innumerable journalistic accounts, policies of control and containment had the effect of also keeping much-needed resources and international humanitarian workers outside the 'Hot Zone' (Radin, 2015). This exploration of geographic charisma offers a novel sociological contribution to the corpus of work on Ebola, EIDs and their pervasion of the popular and scientific imagination. More than this, it also draws attention to the ways in which geographies – real and imagined, actual and potential – are powerful forces in the unfolding of disease events. Clearly diseases have spatial locations and patterns of diffusion (Mayer, 2000). However, it is their geographical characteristics – how places, people, cultures come together in unique and meaningful ways - and the ways in which geographical concepts, ideas and imagery are invoked in calls for attention to EIDs such as Ebola that represent a powerful constituent of the charismatic valence needed to provoke and sustain public interest, funds and action.

It is worth remembering that by the time international military assistance arrived in full force in the region in late 2014, Ebola infection rates had started to plateau and fall. The international media commentary then understandably moved on to one of misspent Ebola funds, corruption, erroneous deployment of military personnel and humanitarian workers that posed a threat to citizens of the

global north through their own wilful risk taking (Miles, 2015; Walsh & Johnson, 2018). Ironically, given the criticism levelled at the hyperbolic media coverage of Ebola that was deemed to have justified the cancellation of international flights to West Africa, xenophophia towards Africans, inhumane systems of quarantine and the revocation of visa rights (Mitman, 2014; Sanburn, 2014; Walsh & Johnson, 2018); maintaining Ebola's charismatic exceptionalism in order to ensure continued research and funding will be a key global health challenge in the face of public 'compassion fatigue' (Moeller, 2002). Indeed, even as the failures of the securitisation and global health agenda to appropriately respond to the West African outbreak have become painfully clear; humanitarian catastrophe continues to rage in the region. West African development trajectories were reversed and health infrastructure was further eroded by the closure of medical schools and the disproportionate mortality of those West African healthcare workers brave enough to staff treatment units. Looking forward, the challenge will be to cultivate and harness new forms of geographic charisma sufficient to ensure resource allocation to the long-term, slow burn of Health Systems Strengthening and Human Resources for Health in a global health funding landscape predicated on quick-fixes and immediate results (Herrick and Brooks, 2018).

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